Claims

[c1]   A method for detecting the status of printers on a network using a print
         processor, said method comprising the acts of:
         sending a signal to a print processor; and
         detecting the status of printers on a network from said print processor
         to determine the availability of said printers.

[c2]   The method of claim 1 wherein said signal is a print task.

[c3]   The method of claim 1 wherein said detecting comprises obtaining network
         print queue information.

[c4]   The method of claim 1 wherein said detecting comprises bi-directional
         communication between a print processor, a port manager and a printing
         device.

[c5]   The method of claim 1 wherein said detecting comprises accessing data from
         a Management Information Base (MIB).

[c6]   The method of claim 1 wherein said detecting comprises communication
         with a printing device using a protocol selected from the group consisting of
         Simple Network Management Protocol (SNMP), Remote Management (RMON)
         and Internet Printing Protocol (IPP).

[c7]   The method of claim 1 wherein said detecting comprises the use of an
         Application Program Interface (API) call.

[c8]   A method of improving the probability of successful print task completion
         using a status detecting print processor, said method comprising:
         sending a print task to a print processor;
         detecting, from said print processor, the status of a plurality of
         printing devices; and
         directing said print task to an available printing device among said
         plurality of printing devices.

[c9]   The method of claim 8 wherein said status of a plurality of printing devices is

presented to a user for selection of one or more available devices and said directing directs said print task to a device selected by said user.

[c10] The method of claim 8 wherein a default printing device is selected by a user prior to said detecting and said directing directs said print task to said default device when said default device is available.

[c11] The method of claim 8 wherein said print processor may also modify a print task to enable cluster printing functions.

[c12] The method of claim 11 wherein said modifying said cluster printing functions comprise job splitting.

[c13] The method of claim 11 wherein said modifying said cluster printing functions comprise copy splitting.

[c14] The method of claim 11 wherein said detecting determines a number of available printing devices and said modifying divides said initial print task into a number of modified print tasks equal to said number of available printing devices.

[c15] A method for improving printing system capability and performance without addition of hardware or modification of application software, said method comprising:
removing a non-status-detecting print processor (NPP) from a printing system; and
replacing said NPP with a status-detecting print processor (SDPP).

[c16] The method of claim 15 wherein said SDPP is also cluster enabling.

[c17] A computer readable medium comprising instructions for performing functions within a print processor, said instructions comprising the acts of:
interpreting print task data; and
detecting the status of printing devices.

[c18]
The computer readable medium of claim 17 further comprising instructions

for the act of redirecting a print task from its original destination to at least one other destination.

[c19]   A computer data signal embodied in an electronic transmission, said signal having the function of detecting printing device status with a print processor, said signal comprising instructions for:
    interpreting print task data; and
    detecting the status of printing devices.

[c20]   A print processor comprising:
    instructions for interpreting print task data; and
    instructions for detecting the status of printing devices.

[c21]   A method of printing using a status detecting print processor, said method comprising:
        selecting a preferred printer group;
        modifying said print task to enable cluster printing thereby creating a plurality of modified print tasks;
        detecting, from said print processor, the status of a plurality of printing devices comprising said preferred printer group;
        directing said modified print tasks to said preferred printer group when all of the printers within said preferred printer group are available; and
        forming a second group of printers comprising the available printers within said preferred group and other available printers and sending said modified tasks to said second group when said second group comprises a sufficient number of printers to print said modified print tasks.

[c22]   The method of claim 21 further comprising selecting a group of backup printers from which said other available printers may be chosen.

[c23]
    The method of claim 21 further comprising reconfiguring said modified print tasks to require fewer printers when a sufficient number of available printers

cannot be found.

[c24] The method of claim 21 further comprising forming a third group of printers comprising any available printers from said preferred group, any other available printers and any busy printers and directing said modified print tasks to said third group.

[c25] The method of claim 21 further comprising entering a wait period when a sufficient number of printers are not available and rechecking for available printers after said wait period.

[c26] The method of claim 21 further comprising activating a user prompt to solicit user input.